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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,867	09/16/2003	Takayuki Kawabe	1990.68360	3124

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Patrick G. Burns, Esq.
GREER, BURNS & CRAIN, LTD.
Suite 2500
300 South Wacker Dr.
Chicago, IL 60606

EXAMINER

ORTIZ CRIADO, JORGE L

ART UNIT	PAPER NUMBER
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2627

DATE MAILED: 08/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/663,867

Applicant(s)

KAWABE, TAKAYUKI

Examiner

Jorge L. Ortiz-Criado

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 6 and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 6 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 1, 6 and 7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 3 and 7 recites the limitation wherein the position trajectory output from the trajectory generating unit is defined a function of third order or higher with respect to time. The disclosure does not enable one skilled in the art to make and use the invention as claimed without undue experimentation, for the higher order function.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 6 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe et al. J.P. 04-028020.

In regard to claim 1, Watanabe discloses a storage apparatus comprising: a lens-moving unit for moving an objective lens in the direction of its optical axis; a focus error detection unit for sensing a targeted position error of the objective lens; a focus search control unit for outputting an order to move the objective lens to the vicinity of a targeted position; a focus servo control unit for causing the objective lens to follow the targeted position; and a trajectory generating unit disposed at the focus search control unit and for generating a position trajectory to move the objective lens "such that the objective lens approaches a targeted position gradually, wherein the position trajectory output from the trajectory generating unit is defined by a function of third order (cubic) or higher (See Abstract).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 1, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable by Tanaka J.P 11-206551.

In regard to claim 1, Tanaka discloses a storage apparatus comprising: a lens moving unit (3) for moving an objective lens in the direction of its optical axis;

a focus error detection unit for sensing a targeted position error of the objective lens (pickup 3, ;see paragraph [0020]);

a focus search control unit (10) for outputting an order to move the objective lens to the vicinity of a targeted position;

a focus servo control unit (2) for causing the objective lens to follow the targeted position; and

a trajectory generating unit (1) disposed at the focus search control unit and for generating" (paragraph [0020]-[0033]; Fig. 5).

Tanaka discloses wherein the position trajectory output from the trajectory-generating unit (1) is defined by a combination of trigonometric function, because the output defined by a function of third order or higher and trigonometric function with respect to time were art-recognized equivalents at the time of the invention, one of ordinary skill in the art would have understood to substitute trigonometric functions by a function of third order or higher because would perform equally as well. As, recognized by the Applicant, see page 29, lines 13-18, "*the focus search control is conducted by a cubic function with respect to time until the shift to the control at a constant velocity. However, the function may be of, for example, fourth-order or higher and a combination trigonometric functions may be used as the function. Otherwise, any function may be used as far as the second order differential of it is a continuous function*".

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4. In regard to claims 6 and 7 have limitations similar to those treated in the above rejection(s), and as discussed above and are rejected for the same reasons of anticipation and/or obviousness as used above.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. J.P Publication No. 04-028020 to Watanabe et al.

Response to Arguments

Applicant's arguments filed 05/05/2006 have been fully considered but they are not persuasive.

Applicant argues that Tanaka discloses “generating a sine-wave shaped trajectory”, and Tanaka does not discloses or suggest a position trajectory output defined by a function of third order or higher with respect to time.

The examiner cannot concur because as acknowledge by the Applicant Tanaka discloses that the position trajectory output from the trajectory-generating unit is defined by a trigonometric function, and because the output defined by a function of third order or higher and trigonometric function with respect to time were art-recognized equivalents at the time of the invention, one of ordinary skill in the art would have understood to substitute trigonometric functions by a function of third order or higher because would perform equally as well. As, recognized by the Applicant, see page 29, lines 13-18, “*the focus search control is conducted by*

a cubic function with respect to time until the shift to the control at a constant velocity. However, the function may be of, for example, fourth-order or higher and a combination trigonometric functions may be used as the function. Otherwise, any function may be used as far as the second order differential of it is a continuous function".

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jorge L. Ortiz-Criado whose telephone number is (571) 272-7624. The examiner can normally be reached on Mon.-Thu.(12:30 pm- 9:00 pm).


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea L. Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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ANDREA WELLINGTON
SUPERVISOR, PATENT EXAMINER